

REMARKS

Without acquiescing to the propriety of the rejections in the Office Action dated May 7, 2007, claims 1, 6 and 21 have been amended, new claims 22 and 23 have been added, and claims 17, 19 and 20 have been cancelled. Claim 18 was previously canceled. Entry of these amendments, reconsideration of the present patent application, and allowance of all pending claims are respectfully requested in view of the remarks below. After entry of the amendments, claims 1-16 and 21-23 are now pending.

Claim Rejections Under 35 U.S.C. § 112:

Claims 1-17 and 19-20 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention. In particular, the Office Action objects to the limitation “allocate the offered capacity” in claim 1. The preamble of claim 1 has been amended to clarify the antecedent basis in the remainder of the claim. Accordingly, this rejection is believed to be overcome.

Claim Rejections Under 35 U.S.C. § 103:

Claims 1-15 and 17-20 stand rejected under 35 U.S.C. § 103(a) as being obvious over Zeni, “Improved Forecast Accuracy in Revenue Management by Unconstraining Demand Estimates from Censored Data” dated October 2001. Initially, Applicant emphasizes that the cited reference is dated after the filing date of the present application and its application herein is most strenuously traversed.

Amended claim 1 of the present application recites, *inter alia*, an air cargo yield management method for optimizing a yield parameter resulting from assigning a capacity offered by a future instance of a cargo flight to each one of a plurality of different categories of requests competing for the capacity. The offered capacity is defined by a weight capacity variable and a volume capacity variable, which are independent relative to each other. A historical scenario for each previous instance of the flight is defined and includes a final potential capacity variable which includes a final potential weight capacity variable and a final potential volume capacity

variable. An authorization to allocate the offered capacity is determined for the weight variable and the volume variable.

Zeni discloses various methods and systems for an airline accepting passenger reservations presumably to maximize airline revenue. However, there is no disclosure, teaching or suggestion of an air cargo yield management method for optimizing a yield parameter resulting from assigning an offered capacity offered by a future instance of a cargo flight nor such a capacity being defined by a plurality of capacity variables. Further, there is no disclosure of determining an authorization to allocate the offered capacity defined by a weight capacity variable and a volume capacity variable, which are independent relative to each other. Instead, the cited reference describes methods for accepting or rejecting reservations for passenger seating based on an available number of seats, but not determining an authorization to allocate based on weight and volume as recited in claim 1.

Also, on page 3 of the Office Action it is alleged that various factors disclosed in Zeni are capacity variables, e.g., number of seats, aircraft capacity, fare classes, etc. Applicant respectfully disagrees with this characterization and notes that “offered capacity” relates to the capacity of an aircraft while fare classes would clearly be a category of request competing for the “offered capacity”. Zeni does not deal with different independent capacity variables such as weight and volume nor defining a final potential capacity volume for weight and volume along with determining an authorization to allocate offered capacity for a weight variable and volume variable. Instead, Zeni discloses a reservation system which does not relate to authorization or independent capacity variables, such as weight and volume.

Relative to the Examiner’s arguments on page 4 that most cargo, air, or other means of transportation methods take into account a plurality of capacity variables including weight and volume as evidenced by the reference cited therein, Applicant respectfully disagrees that these references disclose determining an authorization to allocate offered capacity for a weight variable and volume variable which are independent relative to one another. As described on the bottom of page 2 and top of page 3 of the present patent application, various other methods for allocating weight and volume use one variable (e.g., weight) and check a second variable

a posteriori (e.g., if volume constraints are satisfied), but they do not determine an authorization to allocate offered capacity for two independent variables, such as weight and volume. As is evident from the specification, the authorization to allocate “offered capacity” relates to a forecast of a yield management method while the actual allocation relates to a reservation system.

Also, relative to the arguments on pages 7-9 of the Office Action, it is noted that the Office Action substitutes capacity variable (e.g., weight and volume) for categories of offered capacity (e.g., seats, fare classes, etc.). Zeni clearly does not disclose estimating the potential profile of a potential value of a weight variable and volume variable, finding a historical scenario which includes a final potential weight capacity variable and a final potential volume capacity variable, nor determining an authorization to allocate an offered capacity for the weight variable and the volume variable. Instead, Zeni deals merely with booking classes or fare classes and not independent capacity variables. As indicated above, a category of a request (e.g., a fare class) competing for an offered capacity is not the same as an independent capacity variable (i.e., weight or volume). Further, Zeni deals with the allocation of a capacity of an aircraft and not the authorization to allocate such capacity which is defined by a weight capacity variable and a volume capacity variable, which are independent relative to each other.

Accordingly, Zeni cannot disclose, teach or suggest, or otherwise make obvious, the subject matter for which this reference is relied on in the Office Action, and claim 1 cannot be obvious over the proposed combination.

Further, the Office Action states on page 14 that Zeni does not expressly teach assigning a probability to the historical booking profiles or displaying an acceptance or rejection of a request for a flight as claimed. It is alleged on page 18 that it would have been obvious to one of ordinary skill in the art that the system and method for airline revenue/yield management taught by Zeni would have benefit from assigning a probability to the historical booking profiles in view of teachings of Lee. The resulting system and method is alleged to enable airlines to maximize/optimize revenue/profit by accurately forecasting demand for the plurality of competing demand categories.

Also, pages 18-19 of the Office Action state that neither Zeni nor Lee expressly teach cargo may include items other than passengers. Gunther is alleged to teach the well known utilization/application of yield/revenue management systems and methods for the air cargo industry. It is alleged on page 14 of the Office Action, *inter alia*, that Lee discloses an airline yield management system and method which includes a capacity defined by a plurality of variables.

As described above relative to Zeni, Lee deals with bookings and in particular fare classes, but does not relate at all to defining an offered capacity for a weight variable and a volume variable which are independent relative to each other nor determining an authorization to allocate the offered capacity. Instead, the fare classes described in this reference relate to categories of request for an offered capacity and not to capacity variables, such as weight and volume.

Relative to Gunther, page 7 thereof mentions a cargo yield management problem and page 12 describes briefly that volume and weight may be an issue and that volume and weight buckets may be established. However, there is no disclosure of finding a historical scenario which includes a final potential weight capacity variable and a final potential volume capacity variable, nor determining an authorization to allocate an offered capacity for a weight variable and a volume variable, which are independent relative to each other as recited in claim 1. Thus, claim 1 cannot be obvious over the proposed combination.

Page 20 of the Office Action indicates that it would have been obvious that a combination of Zeni and Lee would have benefited from being utilized to optimize revenue for air cargo in view of Gunther. Applicant respectfully disagrees with this characterization particularly considering there is no disclosure in any of the references of a historical scenario which includes a final potential weight capacity variable and a final potential volume capacity variable nor determining authorization to allocate an offered capacity for the weight capacity variable and the volume capacity variable, which are independent relative to each other. Thus, because the proposed combination cannot disclose, teach or suggest all the features of claim 1 of the present application, nor is there “articulated reasoning with some rational underpinning” to

support the combination, “common sense” dictates that the claimed invention (e.g., determining authorization to allocate an offered capacity for a weight variable and volume variable, the weight variable and volume variable being independent relative to each other) would not be obvious from the proposed combination.

Relative to claim 12, the Office Action states on page 27 that Zeni does not expressly teach updating each input nesting order by ranking the categories having at least one scenario with each component that is strictly positive. The Office Action proceeds to assert official notice that defining nesting order/heirarchy in airline yield/revenue examining systems is well known as is the need to update nesting orders wherein capacity categories, capacity with positive match should be ranked over capacity categories having negative demand. The present application does not relate to virtual nesting and the description of official notice in the third paragraph of page 27 does not make clear what is meant by such virtual nesting or what prior art supports the Office’s position. Applicant respectfully disagrees with this taking of official notice, and requests documentary evidence to support the position of the Office under MPEP § 2144.03. Further, the present application describes two distinct nesting orders, and in particular the partial nesting policy described on page 7 allows each category to reserve capacity assigned to categories of a lower value only when the capacity assigned to the category itself has been completely allocated. This allocation has nothing to do with positive or negative demands as described on page 27 of the Office Action. There is no description in the patent application of positive or negative demands or the ranking of the most demanding to least demanding categories. Thus, the description of official notice does not relate to the claims or description of the present application. Thus, claim 12 is believed not to be anticipated or obvious over Zeni in view of the taking of official notice.

Claim 21:

Claim 21 has been amended to conform the claim to the changes to claim 1 and to recite the authorization including applying a partial nesting policy with two sets of independent authorizations relating to the weight variable and the volume variable. Support for this claim may be found on page 8 of the specification.

On page 30 of the Office Action, official notice is taken that multiple levels of approval/authorization is a known and widely used concept in business. Applicant respectfully disagrees that this relates at all to the partial nesting policy recited in claim 21 of the present application. Applicant respectfully traverses this taking of official notice along with the other such takings of official notice in the Office Action and requests that references be provided which are appropriate to the citations in the Office Action under MPEP § 2144.03. More specifically, the mere existence of multiple levels of approval and/authorization cannot teach a partial nesting policy with two sets of independent authorizations as recited in claim 21 and described on page 8 of the specification. Further, the approval of a particular business decision by a superior is not even remotely related to an authorization to allocate an offered capacity using such a partial nesting policy. Accordingly, claim 21 cannot be obvious over the proposed combination.

New Claims:

Claims 22 and 23 have been added. No new matter has been added and these claims are believed to be allowable.

Claim 22 recites allocating the offered capacity by comparing a request simultaneously to the offered capacity for the weight variable and the volume variable. Claim 23 recites an allocation of offered capacity relative to categories by two sets of independent allocations with each of the allocations using a partial nesting policy. Support for these claims may be found on pages 7-10 of the specification, for example.

There is no disclosure in any of the references of an allocation of an offered capacity which compares a request for the offered capacity simultaneously for a weight variable and a volume variable as recited in claim 22. As described above, one variable may be considered with a second variable considered *a posteriori*, but there is no disclosure of the simultaneous consideration of multiple capacity variables to allocate an offered capacity. Further, relative to claim 23, there is no disclosure of such a simultaneous consideration of multiple capacity variables using a partial nesting policy. Accordingly, new claims 22 and 23 are believed not to be anticipated or obvious over the cited references and thus are believed to be allowable.

Official Notice:

Applicant also respectfully does not concur with the taking of official notice in the last Office Action which is again noted on page 5 of the present Office Action, or any other statements of the taking of official notice in the present Office Action. Documentation relevant to the Official Notice is requested per MPEP § 2144.03.

CONCLUSION

For all of the above reasons, applicant respectfully submits that all claims pending herein are patentable over the cited reference. Therefore, applicant respectfully requests an indication of allowability for all pending claims.

Should the Examiner wish to discuss this case with applicant's attorney, please contact applicant's attorney at the below listed telephone number.

Respectfully submitted,



Victor A. Cardona
Attorney for Applicant
Registration No.: 44,589

Dated: February 29, 2008

HESLIN ROTHENBERG FARLEY & MESITI P.C.

5 Columbia Circle
Albany, New York 12203-5160
Telephone: (518) 452-5600
Facsimile: (518) 452-5579

Attachments: Petition for Extension of Time
Request for Continued Examination